2 Mission, Goals, and Objectives of Program

Sequoia and Kings Canyon National Parks will institute a multi- strategy approach for the fire and fuels management program consistent with the direction and constraints contained in the companion Environmental Assessment (EA). Combining this multi- strategy approach with the park purpose and other guidance outlined in Chapter 1, the parks have developed a concise framework for the fire and fuels management program.

The program is defined by an overarching mission statement, three broad goals, four program objectives, a set of target conditions, and eight primary tools. All of these elements, excluding the target conditions, are visually represented in Table 2- 2.

While the tools are introduced here, they are thoroughly discussed in Chapter 3. Target resource conditions are described in detail in the Fire and Fuels Monitoring Plan (Appendix C).

MISSION STATEMENT

The fire and fuels management program at Sequoia and Kings Canyon National Parks seeks to benefit park resources and society by restoring and maintaining the natural fire regime in a manner consistent with firefighter and public safety.

GOALS

To accomplish the mission statement above, the parks recognize the necessity of managing three elements - values, hazards, and risks - in wildland fire areas. Defined below, these form the basis for the program's three broad goals:

1. **Protect and restore the parks' ecological, cultural, and social values**. Ecological values include vegetation, water, wildlife, natural processes, and air resources. Cultural resource values include prehistoric and historic cultural sites, historic structures, and contemporary structures, both government- owned and private. Social values include park employees, visitors, neighboring communities, and wilderness.
2. **Reduce fire hazards in park ecosystems**. Fire hazard is defined as those attributes that affect the ability to control fires, or contribute to extreme fire behavior. Certain elements that contribute to hazardous fire conditions, such as steep slopes and the amount of solar radiation that heats fuels and dries vegetation, cannot be changed by management actions. Fuel conditions, however, can be effectively altered by management actions and are the focus of most fuel hazard reduction activities.
3. **Reduce risk of unwanted wildland fire**. Risk is defined as the probability of new fire starts, whether by human or natural ignitions (lightning). Since lightning ignition risk is outside the

realm of management control, the focus of the risk portion of the fire management program is to reduce the probability of unwanted human ignitions.

PROGRAM OBJECTIVES

To focus planning and operations, the parks have developed four program objectives that begin to specify the major tasks facing the fire and fuels management staff. Consistent attention to these objectives will achieve the three broad program goals.

1. Manage all unplanned wildland fires appropriately.
   - Manage all wildland fires, regardless of ignition source or the location of ignition, using strategies and tactics commensurate with protection of human health and safety, and natural and cultural resource values, as described in this approved *Fire and Fuels Management Plan*.
   - Utilizing existing interagency wildland fire planning procedures, analyze risks and complexities for all ignitions in order to determine those ignitions which can be successfully managed for the benefit of ecological and life/safety values and those that should be suppressed.
2. Plan and implement appropriate treatments to reduce the threat to values from unwanted wildland fire and to restore or maintain ecological values.
   - Annually, analyze fire hazards, values, and risks so that projects are designed within Fire Management Units (FMUs).
   - Using GIS to plan treatments, ecological, life/safety, infrastructure, and cultural resource values will be analyzed and updated yearly through feedback from monitoring and research advances.
   - Consider and mitigate during the planning phase negative impacts to cultural and natural resources that might result from management operations.
3. Understand the consequences of fire management actions.
   - Monitor and evaluate the effects of fire and fuels management activities on park natural and cultural resources with particular attention to vegetation, water, wildlife, air, and cultural resources.
   - Evaluate monitoring information to refine the management activities and objectives, and prescription range values as appropriate.
   - For vegetation, utilize ecosystem "restoration" and "maintenance" target conditions developed as one benchmark of program success (see Appendix C).
   - Work to ensure that particulates produced by prescribed and wildland fire use projects remain within all federal, state, and local air resource objectives by monitoring smoke in cooperation with the San Joaquin Valley Unified Air Pollution Control District.
   - Identify issues or missing information needs that, once known, will lead to more effective implementation of the parks' fire and fuels management program.
   - Conduct research as issues or information gaps are identified through monitoring and evaluation of fire management activities.
   - Understand public attitudes and political concerns through personal contacts, social science research, and other avenues. Incorporate this information into management decisions as appropriate.

4. Provide current and accurate information on wildland fire and fuels management activities to the public, the park workforce, and cooperating agencies.
    - Provide interpretive and educational programs designed to enhance public and staff understanding and awareness of fire ecology and wildland fire management.

TARGET CONDITIONS

From the mission, goals, and program objectives above, it is evident that the fire and fuels management program at Sequoia and Kings Canyon National Parks focuses on the restoration and maintenance of natural conditions. But what are some measurable characteristics of natural conditions in the parks?

Since the answer to this question determines the parks' ability to judge success, the parks have been developing specific, measurable benchmarks as a point of reference to determine if the resource conditions resulting from fire management actions are meeting park goals for restoring and maintaining natural conditions.

Target conditions are specific measurable conditions derived from the program objectives listed in Section C above. Target conditions answer the question "what would the resource look like if we achieved our goals?"

There are two different types of targets based on existing ecosystem conditions: vegetation structure targets and process targets. *Structure* refers to elements of vegetation communities that can be described in terms of species present, relative abundance of different species, and the arrangement of these elements across the landscape. *Process* refers to the timing of fires, intervals between fires, and the intensity of fires that occurred under natural conditions. In areas of the parks currently in the restoration phase of the program (areas that are significantly altered by past fire suppression), structural targets are used to assess program success. Once these structural targets are met, the area moves into the maintenance phase of the program and process targets are used to evaluate the program goal achievement.

Table 2-1 – Relationship Between Restoration/Maintenance Phase and Structure/Process Targets.

Strategy Based on Existing Resource Condition	Elements of Target Conditions
Restoration Restoring an altered ecosystem to a more natural *structure* (applied in areas that are significantly altered by past fire suppression)	**Structure Targets** Species present Relative abundance of species Arrangement of species Age classes
Maintenance Maintaining dynamically evolving ecosystems in restored or unaltered areas by promoting or simulating the natural *process* (natural fire regime)	**Process Targets** Timing of fires (seasonality) Intervals between fires Intensity of fires under natural conditions Size of fires

Target conditions are very useful to fire managers during both planning and implementation. For example, if the target condition is a stand density of 20- 150 trees/ha and the current

conditions on the ground have three times that many trees, then fire managers might use prescribed fire to reduce stand density. For all specific target conditions, see the Fire and Fuels Monitoring Plan (Appendix C). Once target conditions are identified, appropriate fire management tools are selected and applied to maintain the natural processes that will shape the area into the future.

The parks have developed preliminary target conditions for different vegetation types. They are based on the best available science, including general park information (Chapter 8 – Description of Sequoia and Kings Canyon National Parks) and current fire history data (Chapter 9 – Historic Role of Fire). This best available science is combined with emerging research data, historic photos, written documents, and expert opinion. It is expected that the target conditions will continue to be refined as future research increases knowledge of past conditions. The target conditions, and the fire and fuels management program as a whole, are constantly evaluated through a comprehensive monitoring program (see Appendix C) and special park analysis tools, like the Fire Return Interval Departure (FRID), discussed in Figure 4- 2 in Chapter 4.

The program objectives and target conditions form the basis of Sequoia and Kings Canyon's fire and fuels program. The parks do not arbitrarily set objectives for the number of acres that will be treated with a particular tool (i.e. prescribed fire). Instead, fire managers choose a combination of tools to achieve target conditions. As a result, this fire and fuels program is not defined by the "tools in its toolbox," but rather how restoration and maintenance of natural systems is achieved using these tools.

TOOLS

The key to any successful effort is having access to the right "toolbox." The fire and fuels management program uses the eight tools listed below to accomplish program goals and objectives. These tools are described in detail in Chapter 3.

1. Preparedness Activities
2. Wildland Fire Use
3. Wildland Fire Suppression
4. Prescribed Fire
5. Mechanical Fuel Reduction
6. Public Information and Education
7. Monitoring
8. Research

Table 2-2 – Fire and Fuels Management Program: Mission, Goals, Objectives, and Tools

Fire & Fuels Management Mission Statement	Fire Management Goals	Program Objectives	TOOLS							
			Preparedness Activities	Wildland Fire Use	Wildland Fire Suppression	Prescribed Fire	Mechanical Reduction	Information/ Education	Monitoring	Research
"The fire and fuels management program at Sequoia and Kings Canyon National Parks seeks to benefit park resources and society by restoring and maintaining the natural fire regime in a manner consistent with firefighter and public safety."	***Protect and restore the parks' ecological, cultural, and social values.*** Ecological values include vegetation, water, wildlife, natural processes, and air resources. Cultural values include prehistoric and historic cultural sites, historic structures, and contemporary structures, both government-owned and private. Social values include park employees, visitors, neighboring communities, and wilderness. ***Reduce fire hazards in park ecosystems.*** Fire hazard is defined as those attributes that affect the ability to control fires, or contribute to extreme fire behavior. Fuel conditions can be effectively altered by management actions and are the focus of most fuel hazard reduction activities. ***Reduce risk of unwanted wildland fire***. Risk is defined as the probability of new fire starts, whether by human or natural ignitions (lightning). The focus of the risk portion of the fire program is to reduce the probability of unwanted human ignitions.	1. Manage all unplanned wildland fires appropriately.	X	X	X					
		2. Plan and implement appropriate treatments to reduce the threat to values from unwanted wildland fire and restore or maintain ecological values.	X			X	X			
		3. Understand the consequences of fire management actions.						X	X	X
		4. Provide current and accurate information on wildland fire and fuels management activities to the public, our workforce, and cooperating agencies.	X					X		